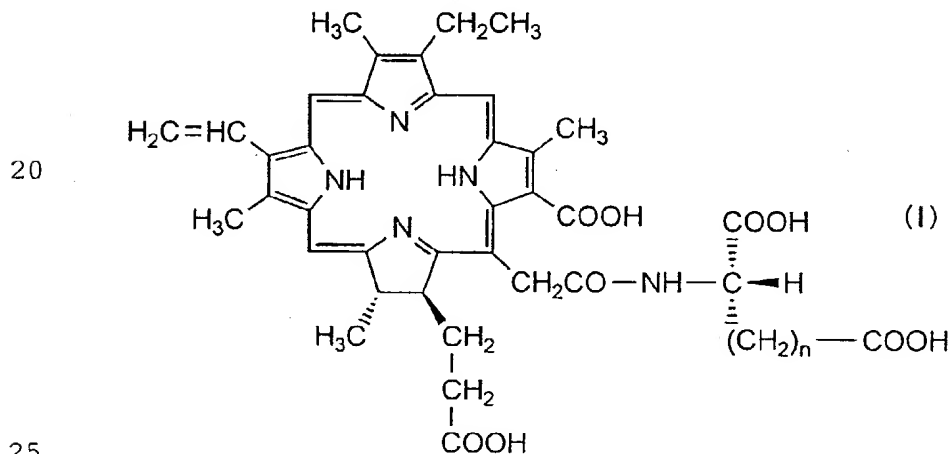


FYE Pending
Claims

CLAIMS

1. A vascular restenosis-suppressing composition,
which is for use as a photosensitive agent in a method
5 of suppressing the vascular restenosis inducible at an
angioplasty-dilated site of a blood vessel having
received a percutaneous transluminal coronary
angioplasty or a percutaneous transluminal angioplasty,
by means of a photodynamic therapy process comprising
10 intravascular irradiation of laser, and which
composition exhibits a suppressive effect on a
thickening of the vascular intima in the interior of the
blood vessel wall at the angioplasty-treated site of the
blood vessel, characterized in that said composition
15 comprises mono-L-aspartylchlorin e6 or mono-L-
glutamylchlorin e6 having a general formula (I)



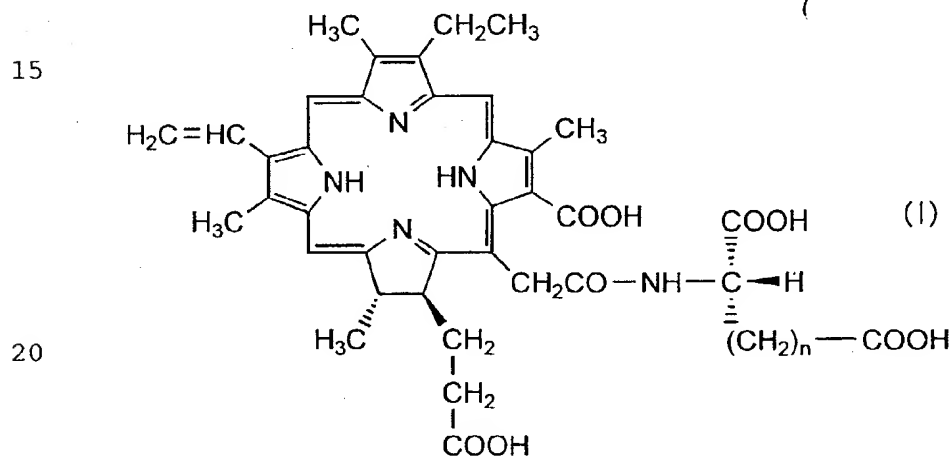
wherein n is an integer of 1 or 2, or a pharma-
cologically acceptable salt thereof, as an active

ingredient.

2. The vascular restenosis-suppressing composition according to Claim 1, characterized in that the compound having the general formula (I) or its salt is mono-L-aspartylchlorin e6 or its tetrasodium salt.

3. A photodynamic therapy method of suppressing such thickening of the vascular intima in the blood vessel wall and also such vascular restenosis of the blood vessel which are inducible after the angioplasty treatment of the blood vessel has been done, which method comprises:-

administering mono-L-aspartylchlorin e6 or mono-L-glutamylchlorin e6 of the general formula (I)



wherein n is 1 or 2, or a salt thereof, to a patient whose blood vessel has received the treatment by angioplasty;

making the administration of the compound of the formula (I) at a dosage so adjusted that a

therapeutically effective amount of the compound of formula (I) can accumulate in the cell layers of the blood vessel wall at the site of the blood vessel having received the treatment by angioplasty;

- 5 inserting percutaneously and transluminally into and locating in the interior of said blood vessel (at the position of the site thereof having received the treatment by angioplasty) ^{which is possible} such a laser-irradiating device that comprises a balloon catheter having a
- 10 central and longitudinal hole therein and having an inflatable balloon made of a laser-transmissive material at the front end of said catheter and that comprises a laser-irradiating optical fiber so arranged as to extend within and through said central and longitudinal hole in
- 15 the balloon catheter and is equipped on the catheter with an inlet tube for introduction of an inflating liquid to be sent into the interior space of said inflatable balloon; and adjusting the position of the balloon catheter within the blood vessel so that said
- 20 balloon of the balloon catheter is located oppositely to the angioplasty-treated site of the blood vessel;

AB making said balloon of the balloon catheter inflate by delivery of the inflating liquid in the interior space of the balloon of the catheter via said inlet tube

25 for introduction of the inflating liquid into the balloon interior space of the catheter of said device, thereby to produce the inflated balloon in the balloon

AB

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catheter;

allowing the central axis of the laser-irradiating optical fiber present within the central and longitudinal hole of said balloon catheter to be held coincidentally with and in the same position as the central axis of the vascular lumen of the blood vessel at the angioplasty-treated site of the blood vessel, with aid of such a supporting force which is generated by said inflated balloon to be exerted on the balloon catheter and on the inner wall of the blood vessel at said angioplasty-treated site;

VAGUE

relevant

and irradiating the compound of formula (I) having accumulated in the interior of the blood vessel wall positioned at the angioplasty-treated site of the blood vessel, with a laser light of an appropriate wavelength, by transmitting from a laser-generator the laser light via said optical fiber in the balloon catheter, in such a manner that the transmitted laser light is emitted outwardly from the laser-emitting part at the front end of said optical fiber and is made to pass through the liquid medium present in the inflated balloon and through the wall material of said inflated balloon of the balloon catheter, so that the emitted laser light irradiates the compound of formula (I) present in the blood vessel inner wall, whereby said compound so irradiated is photoactivated and allowed to generate and exert the suppressive effects thereof against the

thickening of the vascular intima in the angioplasty-treated site of the blood vessel.

4. The photodynamic therapy method according to Claim 3, wherein the angioplasty is a percutaneous
5 transluminal coronary angioplasty or a percutaneous transluminal angioplasty.

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